

bacon while very little was available for other people. Bacon was in fact rationed—120 grammes weekly for each person—and even this amount often could not be had. No more than 200 grammes of beef was available at the normal price. If more was wanted, thrice the price had to be given. "Meat is so expensive," wrote a leading Copenhagen paper, "that common people cannot afford to eat it, even on Sundays." As this shortage of meat was on the verge of inducing revolt among labourers, the president of the Council for Nutrition reported to the Unemployment Committee that it was not possible to procure more than a third of the normal consumption of meat at the ordinary price.

Your readers may not find it easy to decide whom to believe. I venture to remind them that my experiments on a cheap plain Chittenden-like diet were started forty years ago and aroused so much interest that the Government granted me a laboratory for nutrition. When the blockade threatened us in 1917 with starvation, I was appointed counsellor of the Government and issued a pamphlet advising the public to live on a diet consisting mainly of wholemeal rye bread mixed with wheat-bran, potatoes, barley porridge, milk, a little butter, and very little meat and vegetables. Of this pamphlet 40,000 copies were distributed, and in 1918 I spent half my time travelling round the country giving instruction. In the discussions which followed my lectures I often heard housewives say: "That is all very well, but here we all live in accordance with your principles; we are compelled to do so." On these journeys I had ample opportunity to observe the underfeeding of cattle and its consequences. If anyone at that time had said that people were eating more meat than usual, the statement would have raised a laugh.

After living for forty years on the low-protein diet I do not feel old at 76. Last summer I travelled on cycle from one end of the country to the other, about 80 miles a day.—I am, etc.,

Copenhagen, May 29.

M. HINDHEDE.

### Identicalness of Finger-prints of Enzygotic Twins

SIR,—In a letter in the *Journal* of May 21 (p. 1142) I directed attention to the remarkable discrepancy in the opinions held by high medical authorities respecting the (alleged) identicalness, or total dissimilarity, of the finger-prints of uniovular twins, and solicited the opinions of those with special knowledge of the subject. I quoted Dr. Leonard Williams (*Minor Medical Mysteries*) to the effect that "not only their finger-prints but the whole of what is known as the 'friction surfaces' of their hands and feet are frequently found to be identical"; and, contrarily, Sir James Crichton-Browne's concurrence with the contention of Inspector Greville's that "in finger-print identifications the authorities never make a mistake. . . . It is impossible to make a mistake . . . even in twins the finger-marks are totally different."

I have had no reply, and still adhere to my opinion that neither the finger-prints of monozygotic twins nor of any other persons have ever been shown to be identical, despite the high authority of Dr. Leonard Williams, and despite the implied agreement with his statement by Professor J. B. S. Haldane, who writes in *The Inequality of Man*: "Their finger-prints are generally distinguishable, but those of the right hand of one of them are more like those of his brother's right hand than of his own left." My contention was (and is) that the finger-prints of monozygotic twins are *always* easily distinguishable by experts, and that it is impossible for these specialists to err.

This question may, however, be of such importance in criminology that it is clear that it is not to be decided

on the opinion of any authority, however eminent, but upon the established facts of science. Chief Inspector Cherrill, the official in charge of the finger-print bureau at New Scotland Yard, courteously resolved the problem in the following communication, remarkable alike for its clarity and decisiveness:

"In reply to your letter dated May 30, I am directed by the Commissioner of Police of the Metropolis to acquaint you that the finger-prints of twins (including uniovular) are as dissimilar as those of other persons who are in no way related.

The fallacy that the finger-prints of twins are identical arises through the superficial examination of the prints by persons who are not finger-print experts.

It often happens that the finger-prints of twins are similar in pattern, but this is often the case with prints of any other persons. Finger-print identification, however, does not end with similarity of pattern, but is attendant solely upon the coincident sequence of the papillary ridge characteristics, and these have never been found to agree in prints taken of different fingers whether of the same person, twins, or any other persons."

According to Sir Francis Galton, the chances of any two finger-prints proving identical are less than 1 in 64,000,000,000. There is not any flaw in what has been known to experts for many years to constitute "the most infallible identification system in the records of criminology."—I am, etc.,

Liverpool, June 5.

ROBERT COTTER.

### "Spontaneous Human Combustion"

SIR,—The subject of spontaneous combustion apparently attracted the attention not only of the medical profession but of the laity one hundred years ago. In chapter I of *Jacob Faithful*, published in 1834, Captain Marryat gave a vivid account of the spontaneous combustion of the hero's mother. The following passages come from his description:

"The lamp fixed against the after bulkhead, with a glass before it, was still alight and I could see plainly to every corner of the cabin. Nothing was burning—not even the curtains to my mother's bed appeared to be singed . . . there appeared to be a black mass in the centre of the bed. I put my hand fearfully upon it—it was a sort of unctuous, pitchy cinder. . . . As the reader may be in some doubt as to the occasion of my mother's death, I must inform him that she perished in that very peculiar and dreadful manner, which does sometimes, although rarely, occur, to those who indulge in an immoderate use of spirituous liquors. Cases of this kind do indeed present themselves but once in a century, but the occurrence of them is but too well authenticated. She perished from what is termed *spontaneous combustion*, an inflammation of the gases generated from the spirits absorbed into the system."

Note that Captain Marryat quoted five of the six points mentioned by Dr. L. A. Parry (*Journal*, June 4, p. 1237):

(1) The victim was a chronic alcoholic. (2) She was an elderly female. (3) In the cabin there was a lamp which might have occasioned the fire. (4) Little damage was caused to the combustible things in contact with the body. (5) There was a residue of greasy ashes. Captain Marryat did not mention that the hands and feet escaped combustion. Evidently there were doubts as to the origin of the fire, for "after much examination, much arguing, and much disagreement, the verdict was brought in that 'she died by the visitation of God.'"

One can picture the temperance fanatics making much of the phenomenon of spontaneous combustion and pointing out the foretaste in this world of the fate which awaits the drunkard in the next.—I am, etc.,

GAVIN THURSTON, M.R.C.P.

Clapham Common, S.W.4, June 8.